ELECTROMECHANICS

DEGREE TYPE UPON GRADUATION

Bachelor's Degree

DURATION

4 years (8 semesters)

TEACHING LANGUAGE

Romanian

ECTS POINTS

240

PROGRAMME DESCRIPTION

Electromechanics is a specialization in the field of Electric Engineering in which energetics, electronics, computer science, mechanics, automation are interdisciplinary intertwined for the purpose of analyzing complex technical applications based mainly on electromagnetic phenomena. In the curriculum, fundamental, field, specialized and complementary disciplines are studied, useful in training students to become electromechanical engineers.

TUITION

EU citizens: 3900 RON (approx. € 780)

Non-EU citizens: € 2430

ENTRY REQUIREMENTS

Baccalaureate Diploma

REASONS TO CHOOSE THIS PROGRAMME

- Material base in specialized laboratories, which ensures the standards corresponding to a higher education and research process of quality;
- Highly qualified scientifically professors;
- Possibility of further training with master studies in the field of Electrical Engineering/Rapid integration in the globalized market of highly skilled labour.

CAREER OPPORTUNITIES

- electromechanical engineer (215216);
- electromechanical engineer SCB (215201);
- production engineer (215205);
- design electromechanical engineer (215215);
- specialist in electromechanical and automatic maintenance of industrial equipment (215220).

PROGRAMME DETAILS

I st YEAR					
I st SEMESTER			II nd SEMESTER		
Subjects	**ECTS**	**Type of assessment**	**Subjects**	**ECTS**	**Type of assessment**
Mathematical analysis	4	E	Advanced mathematics for engineering	4	E
Linear algebra, analytical and differential geometry	4	E	Probability theory and mathematical statistics	3	C
Physics	5	E	Computers programming and programming languages	4	E
Applied computer science	4	E	Chemistry	2	C
Computer assisted graphics	4	V	Mechanical engineering elements	4	E
Introduction to electrical engineering	4	E	Electrotechnical Materials	3	E
Physical education I	3	A/R	Theory of electric circuit	5	E
English/French language I	2	C	Physical education II	3	A/R
			English/French language II	2	C

* course credit points (ECTS) are not taken into account within the semester credit points (ECTS)

II nd YEAR					
I st SEMESTER			II nd SEMESTER		
Subjects	**ECTS**	**Type of assessment**	**Subjects**	**ECTS**	**Type of assessment**
Theory of electromagnetic field	6	E	Digital systems	4	E
Electronics	4	E	Electrical and electronic measurements	4	E
Technological methods and processes	4	C	Electrical Equipment	4	E
Resistance of materials	3	E	Electromagnetic convertors	4	E
Mechanism and machine organs	4	E	Physical education IV	3	A/R
Numerical methods	4	C	Internship	4	C
Physical education III	3	A/R	Electrical circuit modeling/Computer-assisted design	3	V
English/French language II	2	C	Web Technologies/Databases in Electrical Engineering	2	V
			English/French language II	2	C

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III rd YEAR					
I st SEMESTER			II nd SEMESTER		
Subjects	**ECTS**	**Type of assessment**	**Subjects**	**ECTS**	**Type of assessment**
System theory and control	6	E	Hydro-pneumatic drive systems	3	E
Transducers, interfaces and data acquisition	5	C	Thermotechnics and thermal machines	2	C
Electric drive systems	6	E	Electrical installations	3	E
Systems with microprocessors	4	E	Electric drive systems	4	E
Electrical machines	5	E	Electric drive systems	2	V
Static convertors	4	E	Automotive electric systems	4	E
			Practical application	4	C
			Expert systems and technical diagnostics /Computer-assisted design of electrical installations	2	V
			Programmable and Automated Microcontrollers Controllers/	4	E

			Logical Programmable Controllers		
			General Economics/Ethics and Academic Integrity	2	C

* course credit points (ECTS) are not taken into account within the semester credit points (ECTS)

IVth YEAR					
Ist SEMESTER			IInd SEMESTER		
Subjects	**ECTS**	**Type of assessment**	**Subjects**	**ECTS**	**Type of assessment**
Electric energy transmission and distribution	4	E	Energy sources	4	E
Electric energy transmission and distribution	2	V	Management	2	V
Quality and reliability	3	C	Industrial robotics	4	E
Electromechanical systems	6	E	Use of electricity	5	E
Electromagnetic compatibility	5	E	Drafting of the BD Thesis	4	C
Research Design activity	2	C	Internship for BD Thesis	3	C
Numeric equipment /Industrial electronic systems	4	E	Computer-assisted design of electromechanical systems/Design of industrial electrical systems	4	C
Electric traction /Electrical transport systems	4	E	Software engineering for industrial process management/Intelligent control of electromechanical systems	4	E

* course credit points (ECTS) are not taken into account within the semester credit points (ECTS)

* V = test taken in the last two weeks of the semester (about 10% of the final grade)
* C = test taken in the last two weeks of the semester (about 30% of the final grade)
* E = exam taken during the exam period (at least 50% of the final grade)